

CLAIMS

1) A centring drum for filter assembly machines, the centring drum (1) comprising a substantially cylindrical shell (7) having a longitudinal axis (2) and a transverse reference plane (T), and rotating about said longitudinal axis (2); and a succession of seats (12) formed, parallel to said longitudinal axis (2), on the outside of said shell (7) and equally spaced about said longitudinal axis (2); each said seat (12) receiving a respective filter portion (5), and at least some of said filter portions (5) being offset laterally, along the relative said seats (12), with respect to said reference plane (T); the centring drum (1) comprising centring means (28) which act on each laterally offset filter portion (5) to centre it, along the relative seat (12), with respect to said reference plane (T), and being characterized in that said centring means (28) are fitted to said shell (7) to rotate with the shell (7) about said longitudinal axis (2), and comprise, for each said seat (12), a stop member (40) located on a respective side of said reference plane (T) to define a centred position of the relative said filter portion (5), and push means (29) for moving the relative said filter portion (5) axially onto the relative said stop member (40); the stop members (40) defining a first and a second succession (41, 42) of stop members (40),

located on opposite sides of said reference plane (T); and adjusting means (31) being provided to move said two successions (41, 42) equally and oppositely along said longitudinal axis (2).

5 2) A drum as claimed in Claim 1, wherein said push means (29) are pneumatic means.

3) A drum as claimed in Claim 1 or 2, wherein said push means (29) are suction means which come out inside the relative said seat (12), on the same side of said 10 reference plane (T) as the relative said stop member (40).

4) A drum as claimed in any one of Claims 1 to 3, wherein each said stop member (40) comprises a finger (40) housed in axially sliding manner inside the 15 relative said seat (12), and having an end surface (43) facing said reference plane (T) and defining a stop surface for the relative said filter portion (5).

5) A drum as claimed in Claim 4, wherein said push means (29) are suction means which come out inside the 20 relative said seat (12) at said end surface (43).

6) A drum as claimed in Claim 5, wherein said push means (29) comprise a suction hole (37) which comes out inside the relative said seat (12), beneath the relative said finger (40); and a groove (44) formed along said 25 finger (40), communicating with the relative said suction hole (37), and terminating at said end surface (43).

7) A drum as claimed in one of the foregoing Claims, wherein the stop members (40) in each said succession are integral with one another.

8) A drum as claimed in Claims 4 and 7, wherein
5 said first and said second succession (41, 42) respectively comprise a first and a second annular body (38, 39) which are coaxial with said longitudinal axis (2), are located axially outwards of said seats (12) and on opposite sides of said reference plane (T), and
10 connect the relative said fingers (40) to one another; said first and said second annular body (38, 39) being movable axially with respect to said shell (7), and being fitted to said adjusting means (31).

9) A drum as claimed in Claim 8, wherein said
15 adjusting means (31) comprise at least one first screw-nut screw coupling (52), in turn comprising a screw (50) extending parallel to said longitudinal axis (2), and a nut screw (51) formed through said first annular body (38); at least one second screw-nut screw coupling (58)
20 operating in the opposite direction to said first screw-nut screw coupling (52), and in turn comprising a screw (56) extending parallel to said longitudinal axis (2), and a nut screw (57) formed through said second annular body (39); and a ring gear (47) coaxial with said shell
25 (7) and mounted to rotate, with respect to said shell (7), about said longitudinal axis (2); each said screw (50; 56) being fitted integrally with a relative pinion

(48; 49); each said pinion (48; 49) meshing with said ring gear (47); and actuating means (59) being provided to impart to said ring gear (47) a given, adjustable rotation about said longitudinal axis (2).

5 10) A drum as claimed in any one of Claims 1 to 9, wherein said filter portions (5) define a double filter (5) for cigarettes.